

## Reliable High Performance Processing System (RHPPS), Phase I

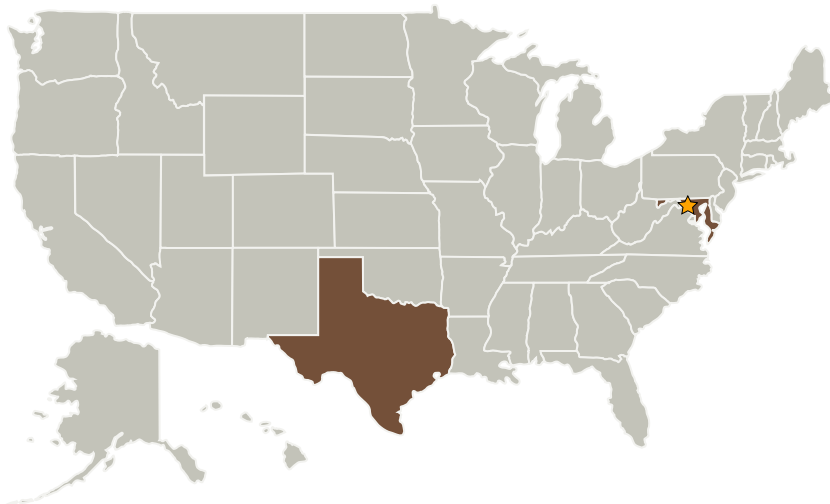
Completed Technology Project (2008 - 2008)



## Project Introduction

NASA's exploration, science, and space operations systems are critically dependent on the hardware technologies used in their implementation. Specifically, the performance and deployment of autonomous and computationally-intensive capabilities for space based observatories, orbiters, autonomous landing and hazard avoidance, autonomous rendezvous and capture, robotic, relative navigation, command, control and communications systems are directly dependent on the availability of radiation-tolerant, high-performance, reconfigurable and adaptable, energy-efficient processor technology. Coherent Logix, Incorporated proposes to develop a radiation tolerant HyperX technology based processor to address these critical needs. This program will leverage more than \$18M investment by the Department of Defense to bring this technology to the Warfighter. The Phase 1 program will outline radiation hardened by design (RHBD) and/or radiation hardened by process (RHBP) approach. This will be followed in Phase 2 and Phase 3 by the design, development, and productization to a TRL 8/9 of a Radiation Tolerant HyperX Processor.

## Primary U.S. Work Locations and Key Partners



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## Organizational Responsibility

**Responsible Mission Directorate:**

Space Technology Mission Directorate (STMD)

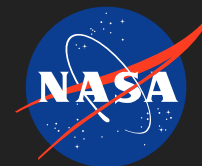
**Lead Center / Facility:**

Goddard Space Flight Center (GSFC)

**Responsible Program:**

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★Goddard Space Flight Center(GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland
Coherent Logix, Inc.	Supporting Organization	Industry	Austin, Texas

## Primary U.S. Work Locations

Maryland	Texas
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## Project Management

**Program Director:**

Jason L Kessler

**Program Manager:**

Carlos Torrez

**Principal Investigator:**

David M Gibson

## Technology Areas

**Primary:**

- TX02 Flight Computing and Avionics
  - └ TX02.1 Avionics Component Technologies
    - └ TX02.1.1 Radiation Hardened Extreme Environment Components and Implementations